CLAIMS

1. A video display device modulating luminances of pixels in accordance with a video signal to display video,

said device emitting a first light emission component and a second light emission component, the first light emission component accounting for D% of a vertical cycle of the video signal in terms of duration and S% of a light emission intensity of a pixel over the vertical cycle, the second light emission component accounting for (100-D)% of the vertical cycle in terms of duration and (100-S)% of the light emission intensity,

wherein D and S meet either a set of conditions A:

$62 \leq S < 100$, $0 < D < 100$, and $D < S$, or

a set of conditions B:

$48 < S < 62$, and $D \leq (S-48)/0.23$.

2. The video display device of claim 1, comprising:

video display means setting transmittances of pixels in accordance with the video signal; and

a light source body illuminating the video display means,

wherein the light source body controls light emission intensities of the first light emission component and the second light emission component.

3. The video display device of claim 2, wherein the light source body is a semiconductor light emitting element.

4. The video display device of claim 3, wherein the semiconductor light emitting element is a light emitting diode.

5. The video display device of claim 2, wherein the light source body is a cold cathode fluorescent lamp.

6. The video display device of claim 1, comprising video display means setting luminances of pixels in accordance with the video signal,

wherein the video display means controls light emission intensities of the first light emission component and the second light emission component.

7. The video display device of claim 6, wherein the video display means is an organic EL panel.

8. The video display device of claim 6, wherein the video display means is a liquid crystal panel.

9. The video display device of any one of claims 6 through 8, wherein:

the video display means includes a memory for each pixel to hold information of the video signal; and

the memory is accessed more than once in each vertical cycle of the video signal to enable the pixel to achieve a light emission waveform representing light emission constituted by the first light emission component and the second light emission component.

10. The video display device of claim 9, wherein:

the video display means includes a light emitting element for each pixel;

the light emitting element emits light in an amount controlled in accordance with the information held in the memory.

11. The video display device of any one of claims 6 through 8, wherein:

the video display means is fed with video data reordered in advance in terms of time; and

each pixel is selected three times in each vertical cycle of the video signal to enable the pixel to achieve a light emission waveform representing light emission constituted by the first light emission component and the second light emission component.

12. The video display device of claim 1, comprising:

video display means setting transmittances of pixels in accordance with the video signal; and

a light source body illuminating the video display means,

said device further comprising light control means, disposed in an optical path provided between the video display means and the light source body, controlling an illumination light intensity of the light source body to control light emission intensities of the first light emission component and the second light emission component.

13. The video display device of claim 12, wherein the light control means entirely or partially transmits the illumination light of the light source body.

14. The video display device of claim 12, wherein the light control means entirely transmits or blocks the illumination light of the light source body.

15. The video display device of any one of claims 12 through 14, wherein the light source body is a semiconductor light

emitting element.

16. The video display device of claim 15, wherein the semiconductor light emitting element is a light emitting diode.

17. The video display device of any one of claims 12 through 14, wherein the light source body is a cold cathode fluorescent lamp.

18. The video display device of claim 1, comprising:

video display means setting transmittance in accordance with the video signal; and

a light source body illuminating the video display means,

wherein:

the light source body illuminates the video display means with illumination light obtained by mixing intermittent light represented by a pulsed light emission intensity waveform which is in synchronism with the video signal and continuous light having a constant light emission intensity; and

light emission intensities of the pixels for the first light emission component and the second light emission component are caused by the intermittent light and the continuous light.

19. The video display device of claim 18, wherein the intermittent light and the continuous light have a light emission intensity set to a level perceivable by the human eye.

20. The video display device of any one of claims 1 through 19, comprising scene change detect means detecting an amount of scene change in the video from the video signal,

wherein a value of S or D is changed in accordance with the amount of scene change.

21. The video display device of any one of claims 1 through 19, comprising scene change detect means detecting an average luminance level in the video from the video signal,

wherein a value of S or D is changed in accordance with the average luminance level.

22. The video display device of claim 1, comprising:

video display means setting transmittances of pixels in accordance with the video signal; and

a light source body illuminating the video display means,

wherein:

the light source body is disposed separated from the video display means; and

the first light emission component and the second light emission component are mixed in a space formed between the light source body and the video display means.

23. The video display device of claim 1, comprising:

video display means setting transmittances of pixels in accordance with the video signal;

a light source body outputting the first light emission component and the second light emission component to illuminate the video display means; and

light mixing means mixing the first light emission component and the second light emission component.

24. The video display device of claim 23, wherein

the light mixing means is a light guide plate;

the light source body is disposed along a single end face of the light guide plate; and

the light guide plate guides the light obtained by mixing the first light emission component and the second light emission component from the end face along which the light source body is disposed to another end face facing the video display means for output to the video display means.

25. The video display device of claim 18, further comprising:

video display means setting transmittances of pixels in accordance with the video signal; and

a light source body illuminating the video display means,

wherein:

the light source body includes a first light source body emitting the intermittent light and a second light source body emitting the continuous light; and

there are provided first light source body drive means controlling ON/OFF of the first light source body and second light source body drive means controlling ON/OFF of the second light source body.

26. The video display device of claim 25, wherein the first light source body drive means switches on/off at least one of electric power, current, and voltage supplied to the first light source body in synchronism with the video signal.

27. The video display device of either one of claims 25 and 26, wherein the second light source body drive means supplies at least one of electric power, current, and voltage to the second light source body at a constant level.

28. The video display device of any one of claims 25 through 27, wherein the second light source body drive means controls at least one of electric power, current, and voltage supplied to the second light source body at a frequency three

times a vertical frequency of the video signal or at a higher frequency.

29. The video display device of any one of claims 25 through 27, wherein the second light source body drive means controls at least one of electric power, current, and voltage supplied to the second light source body at the frequency of 150 Hz or higher.

30. The video display device of any one of claims 25 through 29, wherein the first light source body and the second light source body are semiconductor light emitting elements.

31. The video display device of claim 30, wherein the semiconductor light emitting element is a light emitting diode.

32. The video display device of any one of claims 25 through 29, wherein the second light source body emits the second light emission component by different light emission principles from the first light source body.

33. The video display device of claim 32, wherein at least either one of the first light source body and the second light

source body is a semiconductor light emitting element.

34. The video display device of claim 33, wherein the semiconductor light emitting element is a light emitting diode.

35. The video display device of claim 32, wherein the second light source body is a cold cathode fluorescent lamp.

36. The video display device of claim 1, comprising:

intermittent light signal generating means generating an intermittent light signal alternating between ON and OFF in synchronism with the video signal; and

continuous light signal generating means generating a continuous light signal which is always ON,

wherein the first light emission component and the second light emission component are emitted in accordance with an illumination light signal obtained by combining the intermittent light signal and the continuous light signal.

37. The video display device of claim 36, wherein the continuous light signal has a frequency three times a vertical frequency of the video signal or at a higher frequency.

38. The video display device of claim 36, wherein the continuous light signal has a frequency of 150 Hz or higher.

39. The video display device of any one of claims 36 through 38, wherein the first light emission component and the second light emission component are emitted by a semiconductor light emitting element.

40. The video display device of claim 39, wherein the semiconductor light emitting element is a light emitting diode.

41. The video display device of claim 1, wherein the second light emission component is formed by a collection of pulse components having a higher frequency than a vertical frequency of the video signal.

42. The video display device of claim 41, wherein the pulse components have a frequency three times a vertical frequency of the video signal or a higher frequency.

43. The video display device of claim 41, wherein the pulse components have a frequency of 150 Hz or higher.

44. A video display device modulating luminances of pixels in accordance with a video signal to display video, said device comprising:

video display means setting transmittances of pixels in

accordance with the video signal; and

a first light source body emitting intermittent light represented by a pulsed light emission intensity waveform which is in synchronism with the video signal and a second light source body emitting continuous light represented by constant light emission intensity,

wherein the video display means is illuminated by illumination light obtained by mixing the intermittent light and the continuous light.

45. The video display device of claim 44, further comprising:

first light source body drive means controlling ON/OFF of the first light source body; and

second light source body drive means controlling ON/OFF of the second light source body.

46. The video display device of claim 45, wherein the first light source body drive means switches on/off at least one of electric power, current, and voltage supplied to the first light source body in synchronism with the video signal.

47. The video display device of either one of claims 45 and 46, wherein the second light source body drive means supplies at least one of electric power, current, and voltage to the second light source body at a constant level.

48. The video display device of any one of claims 45 through 47, wherein the second light source body drive means controls at least one of electric power, current, and voltage supplied to the second light source body at a frequency three times a vertical frequency of the video signal or at a higher frequency.

49. The video display device of any one of claims 45 through 47, wherein the second light source body drive means controls at least one of electric power, current, and voltage supplied to the second light source body at a frequency or 150 Hz or higher.

50. The video display device of any one of claims 44 through 49, wherein the first light source body and the second light source body are semiconductor light emitting elements.

51. The video display device of claim 50, wherein the semiconductor light emitting element is a light emitting diode.

52. The video display device of any one of claims 44 through 49, wherein the second light source body emits the continuous light by different light emission principles from the first light source body.

53. The video display device of claim 52, wherein at least either one of the first light source body and the second light source body is a semiconductor light emitting element.

54. The video display device of claim 53, wherein the semiconductor light emitting element is a light emitting diode.

55. The video display device of claim 52, wherein the second light source body is a cold cathode fluorescent lamp.

56. A video display device modulating luminances of pixels in accordance with a video signal to display video,

said device emitting a first light emission component and a second light emission component, the first light emission component accounting for D% of a vertical cycle of the video signal in terms of duration and S% of a light emission intensity of a pixel over the vertical cycle, the second light emission component accounting for (100-D)% of the vertical cycle in terms of duration and (100-S)% of the light emission intensity,

said device comprising scene change detect means detecting an amount of scene change in the video from the video signal,

wherein a value of S or D is changed in accordance with

the amount of scene change.

57. The video display device of claim 56, wherein the scene change detect means performs frame period delay on the video signal using memory, to calculate the amount of scene change from a differential from the delayed signal.

58. The video display device of claim 56, wherein the scene change detect means calculates an average luminance level of the video and calculates the amount of scene change from an interframe differential of the average luminance level.

59. A video display device modulating luminances of pixels in accordance with a video signal to display video,

said device emitting a first light emission component and a second light emission component, the first light emission component accounting for D% of a vertical cycle of the video signal in terms of duration and S% of a light emission intensity of a pixel over the vertical cycle, the second light emission component accounting for (100-D)% of the vertical cycle in terms of duration and (100-S)% of the light emission intensity,

said device comprising average luminance detect means detecting an average luminance level of the video from the video signal,

wherein a value of S or D is changed in accordance with the average luminance level.

60. A video display device modulating luminances of pixels in accordance with a video signal to display video,

said device emitting a first light emission component and a second light emission component, the first light emission component accounting for D% of a vertical cycle of the video signal in terms of duration and S% of a light emission intensity of a pixel over the vertical cycle, the second light emission component accounting for (100-D)% of the vertical cycle in terms of duration and (100-S)% of the light emission intensity,

said device comprising histogram detect means detecting a histogram of the video from the video signal,

wherein a value of S or D is changed in accordance with the histogram.

61. A video display device modulating luminances of pixels in accordance with a video signal to display video,

said device emitting a first light emission component and a second light emission component, the first light emission component accounting for D% of a vertical cycle of the video signal in terms of duration and S% of a light emission intensity of a pixel over the vertical cycle, the

second light emission component accounting for (100-D)% of the vertical cycle in terms of duration and (100-S)% of the light emission intensity,

wherein $D/2 \leq P \leq (100-D/2)$, and $0 < D < 100$,

where P is a ratio in percentages of a duration to the vertical cycle, the duration beginning at a start of the vertical cycle and ending at a midpoint of a light emission period associated with the first light emission component.

62. The video display device of claim 61, wherein

$P = 50 + K$ for $\leq K \leq (50-D/2)$,

where K is a constant dictated by a response time constant of the video display means.

63. The video display device of either one of claims 61 and 62, wherein D and S meet either a set of conditions A:

$62 \leq S < 100$, $0 < D < 100$, and $D < S$, or

a set of conditions B:

$48 < S < 62$ and $D \leq (S-48)/0.23$.

64. The video display device of any one of claims 61 through 63, comprising:

video display means setting transmittances of pixels in accordance with the video signal; and

a light source body illuminating the video display

means,

wherein the light source body controls P.

65. The video display device of claim 64, wherein the light source body is a semiconductor light emitting element.

66. The video display device of claim 65, wherein the semiconductor light emitting element is a light emitting diode.

67. The video display device of claim 64, wherein the light source body is a cold cathode fluorescent lamp.

68. The video display device of any one of claims 64 through 67, wherein the light source body changes P in value from one area to another, the video display screen being divided into the areas.

69. The video display device of any one of claims 61 through 63, comprising video display means setting luminances of pixels in accordance with the video signal,

wherein the video display means controls P.

70. The video display device of claim 69, wherein the video display means is an organic EL panel.

71. The video display device of claim 69, wherein the video display means is a liquid crystal panel.

72. The video display device of any one of claims 69 through 71, wherein:

the video display means includes a memory for each pixel to hold the video signal; and

the memory is accessed more than once in each vertical cycle of the video signal to enable the pixel to achieve a light emission waveform representing light emission constituted by the first light emission component and the second light emission component.

73. The video display device of claim 72, wherein:

the video display means includes a light emitting element for each pixel;

the light emitting element emits light in an amount controlled in accordance with the information held in the memory.

74. The video display device of any one of claims 69 through 71, wherein:

the video display means is fed with video data reordered in advance in terms of time; and

each pixel is selected three times in each vertical cycle

of the video signal to enable the pixel to achieve a light emission waveform representing light emission constituted by the first light emission component and the second light emission component.

75. The video display device of any one of claims 61 through 63, comprising:

video display means setting transmittances of pixels in accordance with the video signal; and

a light source body illuminating the video display means,

said device further comprising light control means, disposed in an optical path provided between the video display means and the light source body, controlling an illumination light intensity of the light source body to control P.